

What is Claimed Is:

1. A support mechanism, the support mechanism comprising:

a base member adapted for supporting the support mechanism from a support surface;

- 5 a first support arm having a distal end pivotally connected to a pivot bracket and a proximal end operatively connected to the base member in a manner to permit pivoting movement of the first support arm relative to the support surface between a stowed position and a deployed position, the distal end of the first support arm being generally adjacent the support surface when the first support arm is in its stowed position and spaced from the support surface when the first support arm is in its deployed position;

- a first synchronizing arm generally adjacent to the first support arm, the first synchronizing arm having a distal end pivotally connected to the pivot bracket and a proximal end operatively connected to the base member in a manner to permit pivoting movement of the first synchronizing arm relative to the support surface, the first synchronizing arm and first support arm being operatively connected to the pivot bracket and base member in a manner so that the first synchronizing arm and first support arm maintain a substantially parallel relationship with one another throughout the entire range of movement of the first support arm between its stowed and deployed positions;

- 20 a second support arm having a distal end pivotally connected to the pivot bracket and a proximal end operatively connected to a load-supporting platform in a manner to permit pivoting movement of the second support arm relative to the load-supporting platform between a stowed position and a deployed position; and

a second synchronizing arm generally adjacent to the second support arm, the second synchronizing arm having a distal end pivotally connected to the pivot bracket and a

proximal end operatively connected to the load-supporting platform in a manner to permit pivoting movement of the second synchronizing arm relative to the load-supporting platform, the second synchronizing arm and second support arm being operatively connected to the pivot bracket and load-supporting platform in a manner so that the second synchronizing arm
5 and second support arm maintain a substantially parallel relationship with one another throughout the entire range of movement of the second support arm between its stowed and deployed positions;

the first and second support arms and first and second synchronizing arms being operatively connected with one another in a manner so that the load-supporting
10 platform moves substantially along a fixed vertical axis as the first and second support arms move between their respective stowed and deployed positions.

2. The support mechanism of claim 1 wherein the first and second support arms and first and second synchronizing arms are operatively connected with one another in a
15 manner so that a first plane passing through the load-supporting platform and a second plane passing through the base member maintain a substantially parallel relationship with one another throughout the entire range of movement of the first and second support arms between their respective stowed and deployed positions.

20 3. The support mechanism of claim 1 wherein the distal end of the first support arm includes a first geared portion and the distal end of the second support arm includes a second geared portion, the first and second geared portions being in meshed engagement with one another throughout the entire range of movement of the first and second support arms between their respective stowed and deployed positions, whereby movement of one of the

first and second support arms between its stowed and deployed positions requires corresponding movement of the other of the first and second support arms between its stowed and deployed positions.

5 4. The support mechanism of claim 1 wherein the first and second support arms extend from the pivot bracket generally in the same direction, when the first and second support arms are in their respective stowed positions.

10 5. The support mechanism of claim 1 wherein first and second support arms lie in the same substantially vertical plane throughout the entire range of movement of the first and second support arms between their respective stowed and deployed positions.

15 6. The support mechanism of claim 5 wherein the first support arm extends upwardly and generally in a first direction from the platform when the first support arm is in its deployed position, and wherein the second support arm extends upwardly and generally in an opposite second direction from the pivot bracket when the second support arm is in its deployed position.

20 7. The support mechanism of claim 1 wherein an angle defined by the first and second support arms increases from about zero degrees when the first and second support arms are in their respective stowed positions to more than 180 degrees as the first and second support arms are moved toward their respective deployed positions.

8. The support mechanism of claim 1 wherein at least one of the base member and pivot bracket includes a first stop member that engages against the first support arm to prevent pivoting movement of the first support arm beyond its deployed position, and wherein an angle between the support surface and first support arm increases from about zero
5 degrees when the first support arm is in its stowed position to more than 90 degrees as the first support arm is moved toward its deployed position, whereby the first support arm is held in its deployed position against the first stop by gravity.

9. The support mechanism of claim 8 wherein at least one of the pivot bracket
10 and load-supporting platform includes a second stop member that engages against the second support arm to prevent pivoting movement of the second support arm beyond its deployed position, and wherein an angle between the load-supporting platform and second support arm increases from about zero degrees when the second support arm is in its stowed position to more than 90 degrees as the second support arm is moved toward its deployed position,
15 whereby the second support arm is held in its deployed position against the second stop by gravity.

10. The support mechanism of claim 1 wherein the first support arm extends upwardly and generally in a first direction from the platform when the first support arm is in
20 its deployed position, and wherein the second support arm extends upwardly and generally in an opposite second direction from the pivot bracket when the second support arm is in its deployed position, and wherein the support mechanism further comprises a lanyard with a first end connected to at least one of the first support arm, second support arm and pivot bracket, the lanyard being adapted to transmit tensile force between the first end and a distal

second end, whereby application of a tensile force to the distal second end of the lanyard generally in the second direction causes the first and second support arms to move back to their respective stowed positions.

5 11. The support mechanism of claim 1 wherein the base member is connected to the support surface in a manner to permit rotating movement of the support mechanism about a generally vertical axis.

10 12. A support mechanism, the support mechanism comprising:
a base member adapted for supporting the support mechanism from a support surface;

a first support arm having a distal end pivotally connected to a pivot bracket and a proximal end operatively connected to the base member in a manner to permit pivoting movement of the first support arm relative to the support surface between a stowed position and a deployed position, the distal end of the first support arm being generally adjacent the support surface when the first support arm is in its stowed position and spaced from the support surface when the first support arm is in its deployed position;

15 a first synchronizing arm generally adjacent to the first support arm, the first synchronizing arm having a distal end pivotally connected to the pivot bracket and a proximal end operatively connected to the base member in a manner to permit pivoting movement of the first synchronizing arm relative to the support surface, the first synchronizing arm and first support arm being operatively connected to the pivot bracket and base member in a manner so that the first synchronizing arm and first support arm maintain a substantially

parallel relationship with one another throughout the entire range of movement of the first support arm between its stowed and deployed positions;

a second support arm having a distal end pivotally connected to the pivot bracket and a proximal end operatively connected to a load-supporting platform in a manner
5 to permit pivoting movement of the second support arm relative to the load-supporting platform between a stowed position and a deployed position; and

a second synchronizing arm generally adjacent to the second support arm, the second synchronizing arm having a distal end pivotally connected to the pivot bracket and a proximal end operatively connected to the load-supporting platform in a manner to permit
10 pivoting movement of the second synchronizing arm relative to the load-supporting platform, the second synchronizing arm and second support arm being operatively connected to the pivot bracket and load-supporting platform in a manner so that the second synchronizing arm and second support arm maintain a substantially parallel relationship with one another throughout the entire range of movement of the second support arm between its stowed and
15 deployed positions;

the first and second support arms and first and second synchronizing arms being operatively connected with one another in a manner so that a first plane passing through the load-supporting platform and a second plane passing through the base member maintain a substantially parallel relationship with one another throughout the entire range of
20 movement of the first and second support arms between their respective stowed and deployed positions.

13. The support mechanism of claim 12 wherein the first and second support arms and first and second synchronizing arms are operatively connected with one another in a

manner so that the load-supporting platform moves substantially along a fixed vertical axis as the first and second support arms move between their respective stowed and deployed positions.

5 14. The support mechanism of claim 12 wherein the load-supporting platform is spaced a first distance from the support surface when the first and second support arms are in their respective stowed positions and spaced a second distance from the support surface when the first and second support arms are in their respective deployed positions, the second distance being greater than the first distance.

10 15. The support mechanism of claim 12 wherein the distal end of the first support arm includes a first geared portion and the distal end of the second support arm includes a second geared portion, the first and second geared portions being in meshed engagement with one another throughout the entire range of movement of the first and second support arms
15 between their respective stowed and deployed positions, whereby movement of one of the first and second support arms between its stowed and deployed positions requires corresponding movement of the other of the first and second support arms between its stowed and deployed positions.

20 16. The support mechanism of claim 12 wherein first and second support arms lie in the same substantially vertical plane throughout the entire range of movement of the first and second support arms between their respective stowed and deployed positions.

17. The support mechanism of claim 16 wherein the first support arm extends upwardly and generally in a first direction from the platform when the first support arm is in its deployed position, and wherein the second support arm extends upwardly and generally in an opposite second direction from the pivot bracket when the second support arm is in its
5 deployed position.

18. The support mechanism of claim 12 wherein an angle defined by the first and second support arms increases from about zero degrees when the first and second support arms are in their respective stowed positions to more than 180 degrees as the first and second
10 support arms are moved toward their respective deployed positions.

19. The support mechanism of claim 12 wherein at least one of the base member and pivot bracket includes a first stop member that engages against the first support arm to prevent pivoting movement of the first support arm beyond its deployed position, and
15 wherein an angle between the support surface and first support arm increases from about zero degrees when the first support arm is in its stowed position to more than 90 degrees as the first support arm is moved toward its deployed position, whereby the first support arm is held in its deployed position against the first stop by gravity.

20. The support mechanism of claim 19 wherein at least one of the pivot bracket and load-supporting platform includes a second stop member that engages against the second support arm to prevent pivoting movement of the second support arm beyond its deployed position, and wherein an angle between the load-supporting platform and second support arm increases from about zero degrees when the second support arm is in its stowed position to

more than 90 degrees as the second support arm is moved toward its deployed position, whereby the second support arm is held in its deployed position against the second stop by gravity.

5 21. The support mechanism of claim 12 wherein the first support arm extends upwardly and generally in a first direction from the platform when the first support arm is in its deployed position, and wherein the second support arm extends upwardly and generally in an opposite second direction from the pivot bracket when the second support arm is in its deployed position, and wherein the support mechanism further comprises a lanyard with a
10 first end connected to at least one of the first support arm, second support arm and pivot bracket, the lanyard being adapted to transmit tensile force between the first end and a distal second end, whereby application of a tensile force to the distal second end of the lanyard generally in the second direction causes the first and second support arms to move back to their respective stowed positions.

15 22. The support mechanism of claim 12 wherein the base member is connected to the support surface in a manner to permit rotating movement of the support mechanism about a generally vertical axis.

20 23. A support mechanism, the support mechanism comprising:
 a base member adapted for supporting the support mechanism from a support surface;
 a first support arm having a distal end pivotally connected to a pivot bracket and a proximal end operatively connected to the base member in a manner to permit pivoting

movement of the first support arm relative to the support surface between a stowed position and a deployed position, the distal end of the first support arm being generally adjacent the support surface when the first support arm is in its stowed position and spaced from the support surface when the first support arm is in its deployed position, the distal end of the
5 first support arm having a first geared portion;

a first synchronizing arm generally adjacent to the first support arm, the first synchronizing arm having a distal end pivotally connected to the pivot bracket and a proximal end operatively connected to the base member in a manner to permit pivoting movement of the first synchronizing arm relative to the support surface, the first synchronizing arm and
10 first support arm being operatively connected to the pivot bracket and base member in a manner so that the first synchronizing arm and first support arm maintain a substantially parallel relationship with one another throughout the entire range of movement of the first support arm between its stowed and deployed positions;

a second support arm having a distal end pivotally connected to the pivot
15 bracket and a proximal end operatively connected to a load-supporting platform in a manner to permit pivoting movement of the second support arm relative to the load-supporting platform between a stowed position and a deployed position, the distal end of the second support arm having a second geared portion; and

a second synchronizing arm generally adjacent to the second support arm, the
20 second synchronizing arm having a distal end pivotally connected to the pivot bracket and a proximal end operatively connected to the load-supporting platform in a manner to permit pivoting movement of the second synchronizing arm relative to the load-supporting platform, the second synchronizing arm and second support arm being operatively connected to the pivot bracket and load-supporting platform in a manner so that the second synchronizing arm

and second support arm maintain a substantially parallel relationship with one another throughout the entire range of movement of the second support arm between its stowed and deployed positions;

wherein the first and second support arms are connected to the pivot bracket in
5 a manner so that the first and second geared portions are in meshed engagement with one another throughout the entire range of movement of the first and second support arms between their respective stowed and deployed positions, whereby movement of one of the first and second support arms between its stowed and deployed positions requires
corresponding movement of the other of the first and second support arms between its stowed
10 and deployed positions.

24. The support mechanism of claim 23 wherein the first and second support arms and first and second synchronizing arms are operatively connected with one another in a manner so that the load-supporting platform moves substantially along a fixed vertical axis as
15 the first and second support arms move between their respective stowed and deployed positions.

25. The support mechanism of claim 23 wherein the first and second support arms and first and second synchronizing arms are operatively connected with one another in a
20 manner so that a first plane passing through the load-supporting platform and a second plane passing through the base member maintain a substantially parallel relationship with one another throughout the entire range of movement of the first and second support arms between their respective stowed and deployed positions.

26. The support mechanism of claim 23 wherein first and second support arms lie in the same substantially vertical plane throughout the entire range of movement of the first and second support arms between their respective stowed and deployed positions.

5 27. The support mechanism of claim 26 wherein the first support arm extends upwardly and generally in a first direction from the platform when the first support arm is in its deployed position, and wherein the second support arm extends upwardly and generally in an opposite second direction from the pivot bracket when the second support arm is in its deployed position.

10 28. The support mechanism of claim 23 wherein an angle defined by the first and second support arms increases from about zero degrees when the first and second support arms are in their respective stowed positions to more than 180 degrees as the first and second support arms are moved toward their respective deployed positions.

15 29. The support mechanism of claim 23 wherein at least one of the base member and pivot bracket includes a first stop member that engages against the first support arm to prevent pivoting movement of the first support arm beyond its deployed position, and wherein an angle between the support surface and first support arm increases from about zero
20 degrees when the first support arm is in its stowed position to more than 90 degrees as the first support arm is moved toward its deployed position, whereby the first support arm is held in its deployed position against the first stop by gravity.

30. The support mechanism of claim 29 wherein at least one of the pivot bracket and load-supporting platform includes a second stop member that engages against the second support arm to prevent pivoting movement of the second support arm beyond its deployed position, and wherein an angle between the load-supporting platform and second support arm increases from about zero degrees when the second support arm is in its stowed position to more than 90 degrees as the second support arm is moved toward its deployed position, whereby the second support arm is held in its deployed position against the second stop by gravity.

31. The support mechanism of claim 23 wherein the first support arm extends upwardly and generally in a first direction from the platform when the first support arm is in its deployed position, and wherein the second support arm extends upwardly and generally in an opposite second direction from the pivot bracket when the second support arm is in its deployed position, and wherein the support mechanism further comprises a lanyard with a first end connected to at least one of the first support arm, second support arm and pivot bracket, the lanyard being adapted to transmit tensile force between the first end and a distal second end, whereby application of a tensile force to the distal second end of the lanyard generally in the second direction causes the first and second support arms to move back to their respective stowed positions.

32. The support mechanism of claim 23 wherein the base member is connected to the support surface in a manner to permit rotating movement of the support mechanism about a generally vertical axis.